American GAS JOURNAL

EDITORIAL INDEX, VOLUME 197–JAN-APRIL 1970

SUBJECT INDEX

TITLE OF ARTICLE AND AUTHOR	MONTH	Pg
Abundant, Low Cost Energy Supply is Major Challenge, W. A. Strauss	Jan.	22
A Distinguished Panel of Gas Energy Industry Leaders Comment on Tomorrow and the Decade Ahead, Dean Hale	Jan.	19
AGJ Interviews A.G.A. President J. W. Heiney, Richard Martin	Jan.	30
Ahead: A Changing Market and New Approaches, John Kean	Jan.	24
Bold, Rapid Change Ahead for Gas Energy Industry, W. P. McCallister	Jan.	22
Break-Even Point and Savings in a Replacement Economy Problem, Richard T. Higgins	Feb.	50
"CHALLENGE OF THE '70's" - Special Report:		
Abundant, Low Cost Energy Supply is Major Challenge, W. A. Strauss	Jan.	22
A Distinguished Panel of Gas Energy Industry Leaders Comment on Tomorrow and the Decade Ahead, Dean Hale	Jan.	19
Ahead: A Changing Market and New Approaches, John Kean	Jan.	24
Bold, Rapid Change Ahead for Gas Energy Industry, W. P. McCallister	Jan.	22
Creative, Imaginative Thinking Needed, Joseph R. Rensch	Jan.	21
Innovation, Imagination to Spur Great Growth, W. R. Stephens	Jan.	24
Meeting Energy Demands Will be Greatest Challenge, Howard Boyd	Jan.	25
Supply, Acceptance, People --- Challenges We Must Meet, G. J. Tankersley	Jan.	28
The '70's --- Great Challenge and Great Opportunity, L.T. Potter	Jan.	26
Tomorrow's Biggest Challenge: THE PUBLIC, C. J. Gauthier	Jan.	20
COMPUTERS/EDP:		
Normalization of Gas Sales, William B. Withers	April	19
CONSTRUCTION:		
Break-Even Point and Savings in a Replacement Economy Problem, Richard T. Higgins	Feb.	50
Holding the Line on Distribution Field Costs, Paul H. Howe	Feb.	17
IPC Finds Maximum Benefits Using Prefabricated Town Border Stations, Terry J. Kohler	Jan.	41
Now: Better Solder Joints for Copper Tubing Piping	April	72
P.E. Keeps Tabs on Plastic Pipe with Continuing Lab and Field Tests, George S. Buczala	Jan.	34
The Excavactor . . . Vacuum Digger Extraordinary, John E. Cohoon	Feb.	44
Utility Inspection of Contractor Work --- How Valuable . . . and How Necessary?, Panel: William H. Barker, Donald R. Linger, Harold L. Pratt, Eugene L. Robinson, James E. Wagner	Feb.	27
Creative, Imaginative Thinking Needed, Joseph R. Rensch	Jan.	21
Demand Elasticity Concepts in Gas Utility Marketing, Daniel Parson	April	47
DECISION AIDS:		
Break-Even Point and Savings in a Replacement Economy Problem, Richard T. Higgins	Feb.	50
Economics of Gas From Far North Pose Interesting Problems, Solutions, Nicholas P. Biederman	March	26
GAS ENERGY MARKETING:		
Abundant, Low Cost Energy Supply is Major Challenge, W.A. Strauss	Jan.	22
A Distinguished Panel of Gas Energy Industry Leaders Comment on Tomorrow and the Decade Ahead, Dean Hale	Jan.	19
AGJ Interviews A.G.A. President J. W. Heiney, Richard Martin	Jan.	30
Ahead: A Changing Market and New Approaches, John Kean	Jan.	24
Bold, Rapid Change Ahead for Gas Energy Industry, Ward P. McCallister	Jan.	22
Creative, Imaginative Thinking Needed, Joseph R. Rensch	Jan.	21
Demand Elasticity Concepts in Gas Utility Marketing, Daniel Parson	April	47
Economics of Gas From Far North Pose Interesting Problems, Solutions, Nicholas P. Biederman	March	26
Getting Closer to the Consumer, C. S. Stackpole	April	31
Innovation, Imagination to Spur Great Growth, W. R. Stephens	Jan.	24
Measuring Advertising Effectiveness, Daniel Parson	March	32
Meeting Energy Demands Will Be Greatest Challenge, Howard Boyd	Jan.	25
Natural-Gas-Fueled Vehicles Probed at IGT Seminar	Jan.	40
NEGA Helps Put "Gas" Into Low-Income Housing, Richard Martin	April	36
1969: It Was A Good Year In Some Ways For Gas Industry	Jan.	28
Normalization of Gas Sales, William B. Withers	April	19
Supply, Acceptance, People --- Challenges We Must Meet, G. J. Tankersley	Jan.	28
The '70's --- Great Challenge and Great Opportunity, L.T. Potter	Jan.	26
Tomorrow's Biggest Challenge: THE PUBLIC, C. J. Gauthier	Jan.	20
Unusual Gas Applications in Industrial Processing, J. H. Brindle	April	54
GAS HANDBOOK ISSUE:		
Corrosion:		
Protective Coatings	March 15	84
Coating Specifications	March 15	78
Coating Weights	March 15	80
Coating, Wrapping Estimating Data	March 15	74
Anodes	March 15	62
Fittings and Flanges:	March 15	34
General Data:		
Excavation Tables	March 15	65
Excavation Volumes	March 15	66
Symbols, Basic Weld	March 15	70
Graphic	March 15	71
Map	March 15	68
Leakage Control Materials:	March 15	64
Meter Data:	March 15	50
Pipe, Steel:		
Working Pressure Tables	March 15	4
Pipe Capacity Table	March 15	42
Visual Identification	March 15	58
Pipe Types	March 15	60
Pipe, Cast Iron:	March 15	16
Pipe, Ductile Iron:	March 15	19
Pipe, Plastic:	March 15	20
Flow Capacities	March 15	30
Welding:	March 15	61
Gas Load Control Center Operates Peak Shaving Plants, N. F. Stultz and Richard A. Haas	March	19
Getting Closer to the Consumer, C. S. Stackpole	April	31
Heating and Cooling as Utilities --- Hartford's Profitable Picture, A. Chandler Taylor	March	15
Holding the Line on Distribution Field Costs, Paul H. Howe	Feb.	17
Imported LNG for Peak Shaving in New England Planned by Distrigas, James P. Lewis	Feb.	59
Innovation, Imagination to Spur Great Growth, W. R. Stephens	Jan.	24
IPC Finds Maximum Benefits Using Prefabricated Town Border Stations, Terry J. Kohler	Jan.	41
LIQUIFIED NATURAL GAS:		
Imported LNG for Peak Shaving in New England Planned by Distrigas, James P. Lewis	Feb.	59
Lubricants for Rotary and Turbine Meters, Joe Wager	March	22
MAINTENANCE:		
Holding the Line on Distribution Field Costs, Paul H. Howe	Feb.	17
Now: Better Solder Joints for Copper Tubing Piping	April	72
The Excavactor . . . Vacuum Digger Extraordinary, J. E. Cohoon	Feb.	44
MEASUREMENT AND REGULATION:		
IPC Finds Maximum Benefits Using Prefabricated Town Border Stations, Terry J. Kohler	Jan.	41
Lubricants for Rotary and Turbine Meters, Joe Wager	March	22
NI-Gas, Bell Labs Testing AAIR Remote Meter Reading	April	51
Torque Values for Meter Assembly, Joe Wager	April	76
Use of Flow Limiting Orifices in Rotary Meter Installations, Joe Wager	Feb.	62
Measuring Advertising Effectiveness, Daniel Parson	March	32
Meeting Energy Demands Will Be Greatest Challenge, Howard Boyd	Jan.	25
Natural-Gas-Fueled Vehicles Probed at IGT Seminar	Jan.	40
NEGA Helps Put "Gas" Into Low-Income Housing, Richard Martin	April	36
NI-Gas, Bell Labs Testing AAIR Remote Meter Reading	April	51
1969: It Was A Good Year in Some Ways for Gas Industry	Jan.	28
Normalization of Gas Sales, William B. Withers	April	19
Now: Better Solder Joints for Copper Tubing Piping	April	72
PEAK SHAVING:		
Gas Load Control Center Operates Peak Shaving Plants, N. F. Stultz and Richard A. Haas	March	19

TITLE OF ARTICLE AND AUTHOR	MONTH	Pg
Imported LNG for Peak Shaving in New England Planned by Distrigas, James P. Lewis	Feb.	59
Propane-Air Peak Shaving Plant Successfully Purged with CO_2	April	66
P.E. Keeps Tabs on Plastic Pipe with Continuing Lab and Field Tests, George S. Buczala	Jan.	34
PIPE AND PIPING:		
Holding the Line on Distribution Field Costs, Paul H. Howe	Feb.	17
IPC Finds Maximum Benefits Using Prefabricated Town Border Stations, Terry J. Kohler	Jan.	41
Now: Better Solder Joints for Copper Tubing Piping	April	72
P.E. Keeps Tabs on Plastic Pipe with Continuing Lab and Field Tests, George S. Buczala	Jan.	34
Propane-Air Peak Shaving Plant Successfully Purged with CO_2	April	66
REMOTE METER READING:		
NI-Gas, Bell Labs Testing AAIR Remote Meter Reading	April	51
Supply, Acceptance, People --- Challenges we Must Meet, G. J. Tankersley	Jan.	28
The Excavactor . . . Vacuum Digger Extraordinary, J. E. Cohoon	Feb.	44
The '70's --- Great Challenge and Great Opportunity, L.T. Potter	Jan.	26
Tomorrow's Biggest Challenge: THE PUBLIC, C. J. Gauthier	Jan.	20
Torque Values for Meter Assembly, Joe Wager	April	76
TOTAL ENERGY AND CENTRAL PLANTS:		
Heating and Cooling as Utilities --- Hartford's Profitable Picture, A. Chandler Taylor	March	15
Unusual Gas Applications in Industrial Processing, J. H. Brindle	April	54
Use of Flow Limiting Orifices in Rotary Meter Installations, Joe Wager	Feb.	62
Utility Inspection of Contractor Work --- How Valuable . . . and How Necessary?, Panel: William H. Barker, Donald R. Linger, Harold L. Pratt, Tugene L. Robinson, James E. Wagner	Feb.	27
UTILIZATION:		
Natural-Gas-Fueled Vehicles Probed at IGT Seminar	Jan.	40
NEGA Helps Put "Gas" into Low-Income Housing, Richard Martin	April	36
Unusual Gas Applications in Industrial Processing, J.H. Brindle	April	54

AUTHOR INDEX

AUTHORS		MONTH	Pg
Barker, William H.	Utility Inspection of Contractor Work --- How Valuable . . . and How Necessary?	Feb.	27
Biederman, Nicholas P.	Economics of Gas From Far North Pose Interesting Problems, Solutions	March	26
Boyd, Howard	Meeting Energy Demands Will Be Greatest Challenge (Challenge of the 70's)	Jan.	25
Brindle, J. Harry	Unusual Gas Applications in Industrial Processing	April	54
Buczala, George S.	P.E. Keeps Tabs on Plastic Pipe with Continuing Lab and Field Tests	Jan.	34
Cohoon, John E.	The Excavactor . . . Vacuum Digger Extraordinary.	Feb.	44
Gauthier, C. J.	Tomorrow's Biggest Challenge: The Public	Jan.	20
Haas, Richard A.	Gas Load Control Center Operates Peak Shaving Plants	March	19
Hale, Dean	A Distinguished Panel of Gas Energy Industry Leaders Comment on Tomorrow and the Decade Ahead	Jan	19
Higgins, Richard T.	Break-Even Point and Savings in a Replacement Economy Problem	Feb.	50
Howe, Paul H.	Holding the Line on Distribution Field Costs	Feb.	17
Kean, John	Ahead: A Changing Market and New Approaches	Jan.	24
Kohler, Terry J.	IPC Finds Maximum Benefits Using Prefabricated Town Border Stations	Jan.	41
Lewis, James P.	Imported LNG for Peak Shaving in New England Planned by Distrigas	Feb.	59
Linger, Donald R.	Utility Inspection of Contractor Work --- How Valuable . . . and How Necessary?	Feb.	27
McCallister, Ward P.	Bold, Rapid Change Ahead for Gas Energy Industry	Jan.	22
Martin, Richard	AGJ Interviews A.G.A. President J.W. Heiney	Jan.	30
	NEGA Helps Put "Gas" Into Low-Income Housing	April	36
Parson, Daniel	Demand Elasticity Concepts in Gas Utility Marketing	April	47
	Measuring Advertising Effectiveness	March	32
Potter, L.T.	The '70's --- Great Challenge and Great Opportunity	Jan.	26
Pratt, Harold L.	Utility Inspection of Contractor Work --- How Valuable . . . and How Necessary?	Feb.	27
Rensch, Joseph R.	Creative, Imaginative Thinking Needed	Jan.	21
Robinson, Eugene L.	Utility Inspection of Contractor Work --- How Valuable . . . and How Necessary?	Feb.	27
Stackpole, C.S.	Getting Closer to the Consumer	April	31
Stephens, W.R.	Innovation, Imagination to Spur Great Growth	Jan.	24
Strauss, W.A.	Abundant, Low Cost Energy Supply is Major Challenge	Jan.	22
Stultz, N.F.	Gas Load Control Center Operates Peak Shaving Plants	March	19
Tankersley, G.J.	Supply, Acceptance, People --- Challenge We Must Meet	Jan.	28
Taylor, A. Chandler	Heating and Cooling as Utilities --- Hartford's Profitable Picture	March	15
Wager, Joe	Lubricants for Rotary and Turbine Meters	March	22
	Use of Flow Limiting Orifices in Rotary Meter Installations.	Feb.	62
	Torque Values for Meter Assembly	April	76
Wagner, James E.	Utility Inspection of Contractor Work --- How Valuable . . . and How Necessary?	Feb.	27
Withers, William B.	Normalization of Gas Sales	April	19

Pipeline Engineer

EDITORIAL INDEX, VOLUME XLII—JAN-APRIL 1970

SUBJECT INDEX

TITLE OF ARTICLE AND AUTHOR		MONTH	Pg
COATING & WRAPPING	Price Galveston Plant Has Active First Year	April	50
COMPRESSORS, GAS	Gasunie's Ommen Compressor Station Going For 300,000 Hp, R. J. Schaeffer	Feb.	25
CONSTRUCTION	Economics of Large Diameter Pipelines, Joseph E. White	Feb.	30
	Super-Inch Is In	Feb.	36
	Transco Finds Use of 42-in. Pipe Pays, George O. Ives	Feb.	42
	Ultrasonic Field Girth Weld Inspection on Big Pipe, A. C. Underwood and Ardis White	Feb.	47
	Tennessee Installs a Major Underwater Pipeline, George O. Ives	April	31
CONTINUOUS TABLES	Dehydration Charts for Natural Gas	Feb.	37
DESIGN	Economics of Large Diameter Pipelines, Joseph E. White	Feb.	30
ECONOMICS	Economics of Large Diameter Pipelines, Joseph E. White	Feb.	30
INTERNATIONAL PIPELINING	Gasunie's Ommen Compressor Station Going for 300,000 Hp, R. J. Schaeffer	Feb.	25
	Computerized Microwave System Keeps Barge on Course	April	48
MAINTENANCE & REPAIR	Shell Lays Pipe Vertically to Repair Offshore Break	April	58
	Novel Method of Lifting Submerged Pipelines, Dailey J. Berard	April	60
METERING, GAS	How Colossal Colonial Meters 1,000,000 B/d Max., J. T. Brady	April	64
METERING, OIL	How Colossal Colonial Meters 1,000,000 B/d Max., J. T. Brady	April	64
OUTLOOK	Innovations in Pipelining --- the decade ahead, Edward R. Leach and The Committee of Seventy-Six	Jan.	24
	R. H. Fulton Looks at the Future, R. H. Fulton	Jan.	34
	I. J. Crosthwaite Looks at the Future, I. J. Crosthwaite	Jan.	35
	Energy Requirements Up 45% in 10 Years	Jan.	36
	Large-Scale Pipelining of Methanol-Ethylene-Hydrogen, Gilbert V. Rohleder	Jan.	41
PIPE & PIPING	Economics of Large Diameter Pipelines, Joseph E. White	Feb.	30
	Super-Inch Is In	Feb.	36
	Transco Finds Use of 42-in. Pipe Pays, George O. Ives	Feb.	42
SLURRY PIPELINING	Pipelines for Sewage Disposal Studied E. J. Wasp, T. L. Thompson, and P. E. Snoek	Jan.	39
STATION DESIGN	Gasunie's Ommen Compressor Station Going for 300,000 Hp, R. J. Schaeffer	Feb.	25
TESTING PIPELINES	Ultrasonic Field Girth Weld Inspection on Big Pipe, A. C. Underwood and Ardis White	Feb.	47
UNDERWATER PIPELINES	Tennessee Installs a Major Underwater Pipeline, George O. Ives	April	31
	Profits in Acoustics, A New Sound in Offshore Systems, Kenneth E. Britain	April	36
	Control of Concrete Jacket Weight is Critical, C. L. Amos and P. A. Dantz	April	42
	Computerized Microwave System Keeps Barge on Course	April	48
	Houston-New Orleans Develops New Pipe Tensioning Technique, Dailey J. Berard	April	51
	Shell Lays Pipe Vertically to Repair Offshore Break	April	58
	Novel Method of Lifting Submerged Pipelines, Dailey J. Berard	April	60
	Directory of Offshore Pipeline Contractors	April	62
STATION HANDBOOK	Something Different	March	5
CRUDE	Trans Mountain Oil Pipe Line Company	March	6
	Shell Pipe Line Corporation	March	9
GAS	Texas Eastern Transmission Corporation	March	13
	Great Lakes Gas Transmission Company	March	17
	Tennessee Gas Pipeline Company	March	23
	Columbia Gulf Transmission Company	March	28
	El Paso Natural Gas Company.	March	34
PRODUCTS	Williams Brothers Pipe Line Company	March	41
	Colonial Pipeline Company	March	47
	Plantation Pipe Line Company	March	53

AUTHOR INDEX

AUTHORS		MONTH	Pg
Amos, C. L. (and Dantz, P. A.)	Control of Concrete Jacket Weight is Critical	April	42
Berard, Dailey J.	Houston - New Orleans Develops New Pipe Tensioning Technique	April	51
	Novel Method of Lifting Submerged Pipelines	April	60
Brady, J. T.	How Colossal Colonial Meters 1,000,000 B/d Max.	April	64
Britain, Kenneth E.	Profits in Acoustics, A New Sound in Offshore Systems	April	36
Crosthwaite, I. J.	I. J. Crosthwaite Looks at the Future	Jan.	35
Dantz, P. A. (and Amos, C. L.)	Control of Concrete Jacket Weight is Critical	April	42
Fulton, R. H.	R. H. Fulton Looks at the Future	Jan.	34
Ives, George O.	Transco Finds Use of 42-in. Pipe Pays	Feb.	42
	Tennessee Installs a Major Underwater Pipeline	April	31
Leach, Edward R.	Innovations in Pipelining -- the decade ahead	Jan.	24
Rohleder, Gilbert V.	Large-Scale Pipelining of Methanol-Ethylene-Hydrogen	Jan.	41
Schaeffer, R. J.	Gasunie's Ommen Compressor Station Going For 300,000 Hp	Feb.	25
Snoek, P. E. (and Wasp, E. J. and Thompson, T. L.)	Pipelines for Sewage Disposal Studied	Jan.	39
Thompson, T. L. (and Snoek, P. E. and Wasp, E. J.)	Pipelines for Sewage Disposal Studied	Jan.	39
Underwood, A. C. (and White, Ardis)	Ultrasonic Field Girth Weld Inspection on Big Pipe	Feb.	47
Wasp, E. J. (and Snoek, P. E. and Thompson, T. L.)	Pipelines for Sewage Disposal Studied	Jan.	39
White, Ardis (and Underwood, A. C.)	Ultrasonic Field Girth Weld Inspection on Big Pipe	Feb.	47
White, Joseph E.	Economics of Large Diameter Pipelines	Feb.	30

PIPELINE & GAS JOURNAL

SERVING THE ENERGY TRANSPORTATION & DISTRIBUTION INDUSTRIES

EDITORIAL INDEX, VOLUME 197–MAY-DEC 1970

SUBJECT INDEX

TITLE OF ARTICLE AND AUTHOR	MONTH	Pg
AUTOMATION — Automatic System Controls Gas Flow From Wellhead to Customers, H. T. Andersen	May	48
Automated Delivery Terminal Effects Economies	May	52
Computer Techniques Applied to Maintenance, John B. Selstad and Ivan C. Odom	May	58
Computer-Telemetry System Controls Britain Gas Grid, Joseph A. Kornfeld	May	68
COMPRESSORS, GAS — Texas Eastern Installs Packaged Turbine-Compressor Units for $170/hp, Frank H. Love	Oct.	71
COMPUTERS — Computer Techniques Applied to Maintenance, John B. Selstad and Ivan C. Odom	May	58
Computer-Telemetry System Controls Britain Gas Grid, Joseph A. Kornfeld	May	68
CONSTRUCTION — How to Cut Rising Costs, Dean Hale	May	43
Underwater Crossing of Colorado Adds 200 MMcfd for California	May	99
50/52 = More Gas At Minimum Cost, Faiz Boustany and Hisham Dahmash	June	53
Australia's Longest Pipeline Operational, R. D. Walker and Charles A. Martin	June	60
South Wales River Crossings Installed in Record Time, Joseph A. Kornfeld	June	84
SUMED Pipeline - Shortcut to Europe for Middle East Oil, F. E. Mortier	June	78
Mesdar-Skikda Line A Challenging 456 Miles, Gregory E. Kent	June	89
4-in. Plastic Pipe Plowed-In on Cold Northern Michigan Job	June	94
Record Rain Makes Every Day Count on 80-Mile Job	Aug.	72
Intratex Boosts Houston Area Gas Supply, Frank H. Love	Sept.	35
New Line Adds 205,000 B/d to Products System	Sept.	40
CGT's 1970 Loop Program is Smooth Inside Job, George Ives	Sept.	42
NGPL's Amarillo Line Loops Add 100-Million Cu Ft Capacity, Dean Hale	Sept.	46
Transco Loops See FB&D Run A 1200-Mile Spread, Edward R. Leach	Sept.	54
New Plastic Pipe Laid in Freezing Weather	Sept.	61
Wind and Rain Hamper Laying of Canada's First 42-in., Leslie O. Rowland	Sept.	65
Foam Shield Cushions Pipe Against Rock, Dean Hale	Sept.	77
Safety: It's a New Game, Dean Hale	Oct.	35
Dozer-Auger Speeds Backfill on California Products Line	Oct.	52
Work Completed on Collins Line, George Ives	Oct.	56
Distribution Piping Reaches New High, Dean Hale	Nov.	37
Plastic Pipe Hits 7800 Miles, Dean Hale	Nov.	38
Research Is Finding Answers to Arctic Pipelining, Frank H. Love	Nov.	43
Distribution Piping Materials, Nicholas P. Biederman	Nov.	48
Worcester Plows-In Plastic System, Richard E. Fleming	Nov.	58
Brine Line Serves Chemical Plants, Frank H. Love	Nov.	72
CONTINUOUS TABLES — Compressor Horsepower Diagram	Oct.	85
Gas Flow Conversion Diagram	Oct.	85
Diagrams Ease Compressor Performance Calculations	Oct.	86
Valve C_V For Sonic Flow	Dec.	59
Water Hammer Pressure Rise & Valve Closure Time	Dec.	60
CORROSION — Foam Shield Cushions Pipe Against Rock, Dean Hale	Sept.	77
EQUIPMENT & INSTRUMENTS — Automatic System Controls Gas Flow From Wellhead to Customers, H. T. Andersen	May	48
GAS ENERGY MARKETING — Elasticity Measurements & Value of Service, Daniel Parson	May	92
Gas Marketing During Supply Shortages, Daniel Parson	June	49
Can Natural Gas Help Us Survive on a Polluted Planet?, Nicholas P. Biederman	July	46
Pollution - Its Effect on Gas Marketing, Daniel Parson	July	67
Pollution - Opportunity or Catastrophe for Gas?, C. S. Stackpole	July	74
Natural Gas by Airfreight?, Nicholas P. Biederman	Oct.	62
Gas Shortages and Public Understanding, Daniel Parson	Oct.	78
Who Can Cure the Gas Shortage?, Daniel Parson	Dec.	66
GOVERNMENT REGULATIONS — Safety: It's a New Game, Dean Hale	Oct.	35
USGS Rules Designed to Promote Safer Offshore Pipeline Installations Edward R. Leach	Oct.	50
INSTRUMENTATION — Automatic System Controls Gas Flow From Wellhead to Customers, H. T. Andersen	May	48
INTERNATIONAL PIPELINING — Computer-Telemetry System Controls Britain Gas Grid, Joseph A. Kornfeld	May	68
50/52 = More Gas At Minimum Cost, Faiz Boustany and Hisham Dahmash	June	53
Australia's Longest Pipeline Operational, R. D. Walker and Charles A. Martin	June	60
SUMED Pipeline - Shortcut to Europe for Middle East Oil, F. E. Mortier	June	78
South Wales River Crossings Installed in Record Time, Joseph A. Kornfeld	June	84
Mesdar-Skikda Line a Challenging 456 Miles, Gregory E. Kent	June	89
LNG — LNG: Bright New Star on the Energy Scene, Dean Hale	June	39
Imported LNG May Go Much Farther Than Expected, Nicholas Biederman	June	44
LNG Maintains Service During Line Upgrading Project	June	46
Bi-Directional Piston Prover Tests Turbines For Cryogenic Liquid Measurement, F. F. Shamp	Aug.	64
Second International LNG Conference Scheduled for Paris	Oct.	42
Imports, Terminals, Satellites Highlight LNG Developments, Dean Hale	Oct.	43
Invar Alloy Proves Worth for LNG Tanker Applications, J. Caillaud	Oct.	45
LNG Scorecard	Dec.	34
Satellite Peakshaving with LNG, Nicholas P. Biederman	Dec.	48
TET's LNG Plant Ready to Battle Energy Pinch, Frank H. Love	Dec.	52
MAINTENANCE & REPAIR — How to Cut Rising Costs, Dean Hale	May	43
Computer Techniques Applied to Maintenance, John B. Selstad and Ivan C. Odom	May	58
LNG Maintains Service During Line Upgrading Project	June	46
The Four Dimensions of Leak Classification, Frank Fair	Oct.	38
MEASUREMENT & REGULATION — Pressure Elevation Compensation for Better Measurement, Louis J. Delaney	May	78
New Ideas in Measurement and Pressure Regulation, Joe Wager	May	87
Proving Large Capacity Meters to Meet High Accuracy Demands, David F. Kee	Aug.	39
Why Mass Metering?, J. W. Stansfield and H. J. Evans	Aug.	44
Big Summer Irrigation Load Exceeds Winter Demand	Aug.	52
Proving Liquid Turbine Meters, George O. Ives	Aug.	56
Bi-Directional Piston Prover Tests Turbines for Cryogenic Liquid Measurement, F. F. Shamp	Aug.	64
Liquid Measurement for the 70's, Gordon W. Swinney	Aug.	76
More New Ideas in Measurement and Pressure Regulation, Joe Wager	Oct.	81
Pilot Operated Regulators (Measurement Manual), Frank St. Amand	Nov.	51
Measuring BTU's in a Hot & Cold System, Joseph Wager	Nov.	63
Fundamentals of Regulators, Joe Wager	Dec.	61
MEASUREMENT MANUAL — Pilot Operated Regulators, Frank St. Amand.	Nov.	70
Fundamentals of Regulators, Joe Wager	Dec.	61
METERING, GAS — Proving Large Capacity Meters to Meet High Accuracy Demands, David F. Kee	Aug.	39
Why Mass Metering?, J. W. Stansfield and H. J. Evans	Aug.	44
Big Summer Irrigation Load Exceeds Winter Demand	Aug.	53
METERING, OIL — Proving Liquid Turbine Meters, George O. Ives	Aug.	56
Liquid Measurement for the 70's, Gordon W. Swinney	Aug.	76
METER PROVING — Proving Large Capacity Meters to Meet High Accuracy Demands, David F. Kee	Aug.	39
Proving Liquid Turbine Meters, George O. Ives	Aug.	56
Bi-Directional Piston Prover Tests Turbines for Cryogenic Liquid Measurement, F. F. Shamp	Aug.	64
NOISE ABATEMENT — Noise Abatement Sprayed on Pipelines	Sept.	80
ODORIZATION — Odortron: A Better 'Nose', Nicholas P. Biederman.	May	90
PEAK SHAVING — Storage, LNG, LPG-Air, Holders, Oil-Gas-Industry Ready to Shave '70-'71 Peaks, Dean Hale	Dec.	33
LNG Scorecard	Dec.	34
Underground Gas Storage Operations	Dec.	38
Propane-Air Gas-Making Plants for Peak Shaving	Dec.	39
Satellite Peakshaving with LNG, Nicholas P. Biederman	Dec.	48
TET's LNG Plant Ready to Battle Energy Pinch, Frank H. Love	Dec.	52
PIPE & PIPING — New Plastic Pipe Laid in Freezing Weather	Sept.	61
Distribution Piping Reaches New High, Dean Hale	Nov.	37
Plastic Pipe Hits 7800 Miles, Dean Hale	Nov.	38
X-100 No Longer a Pipe Dream, Edward R. Leach	Nov.	40
Distribution Piping Materials, Nicholas P. Biederman	Nov.	48
Worcester Plows-In Plastic System, Richard E. Fleming	Nov.	58
PIPE PROTECTION — Foam Shield Cushions Pipe Against Rock, Dean Hale	Sept.	77
POLLUTION REPORT — Can Natural Gas Help Us Survive on a Polluted Planet?, Nicholas P. Biederman	July	46
Pollution - Its Effect on Gas Marketing, Daniel Parson	July	67
Pollution - Opportunity or Catastrophe For Gas?, C. S. Stackpole	July	74
Gas Shortages and Public Understanding, Daniel Parson	Oct.	78
PRIME MOVERS — Texas Eastern Installs Packaged Turbine-Compressor Units for $170/hp, Frank H. Love	Oct.	71
What Columbia Gulf Has Learned About Turbines, James M. Simpson	Nov.	78
RESEARCH — Research Is Finding Answers to Arctic Pipelining, Frank H. Love	Nov.	43
SAFETY — Safety: It's a New Game, Dean Hale	Oct.	35
SLURRY PIPELINING — Where the Action Is, E. J. Wasp	July	37
Solids Preparation for Pipeline Transport, M. Donovan and M. T. Scholtz	July	40
Buckeye Building Brine Line to Serve Chemical Industry, George A. Chilcote and H. H. Cassler	July	42
Economics of Solid Pipelining, J. G. Bruce	July	44
STORAGE UNDERGROUND — Underground Storage System Floats Oil on Water Bed, Kjell Christenson	June	66
U. S. Underground Gas Storage Operations - Operating Companies	Dec.	38
TERMINALS — Automated Delivery Terminal Effects Economies	May	52
TOTAL ENERGY & CENTRAL PLANTS — 7000 Feet in Seven Months Is Hot & Cold Progress, Dean Hale	Sept.	38
Measuring BTU's in a Hot & Cold System, Joseph Wager	Nov.	63
Hurricane Didn't Bother Gas Total Energy, Ron Burlington	Nov.	69
TURBINES — What Columbia Gulf Has Learned About Turbines, James M. Simpson	Nov.	78
UNDERWATER PIPELINES — Underwater Crossing of Colorado Adds 200 MMcfd for California	May	99
South Wales River Crossings Installed in Record Time, Joseph A. Kornfeld	June	84
USGS Rules Designed to Promote Safer Offshore Pipeline Installation Edward R. Leach	Oct.	50
UTILIZATION — Natural Gas by Airfreight?, Nicholas P. Biederman	Oct.	62
WELDING — Big 3 Introduces High Speed Automatic Welder	Sept.	80

AUTHOR INDEX

AUTHOR			
Andersen, H. T.	Automatic System Controls Gas Flow From Wellhead to Customers	May	48
Biederman, Nicholas	Odortron: A Better 'Nose'	May	90
	Imported LNG May Go Much Farther Than Expected	June	44
	Can Natural Gas Help Us Survive on a Polluted Planet?	July	46
	Natural Gas by Airfreight?	Oct.	62
	Distribution Piping Materials	Nov.	48
	Satellite Peakshaving With LNG	Dec.	48

AUTHOR		MONTH	Pg
Boustany, Faiz	(and Dahmash, Hisham) 50/52 = More Gas at Minimum Cost	June	53
Bruce, J. G.	Economics of Solid Pipelining	July	44
Burlington, Ron	Hurricane Didn't Bother Gas Total Energy	Nov.	69
Caillaud,J.	Invar Alloy Proves Worth for LNG Tanker Applications	Oct.	45
Cassler, H. H.	(and Chilcote, George A.) Buckeye Building Brine Line to Serve Chemical Industry	July	42
Chilcote, George A.	(and Cassler, H. H.) Buckeye Building Brine Line to Serve Chemical Industry	July	42
Christenson, Kjell	Underground Storage System Floats Oil on Water Bed	June	66
Dahmash, Hisham	(and Boustany, Faiz) 50/52 = More Gas at Minimum Cost	June	53
Delaney, Louis J.	Pressure Elevation Compensation for Better Measurement	May	78
Donovan, M.	(and Scholtz, M. T.) Solids Preparation for Pipeline Transport	July	40
Evans, H. J.	(and Stansfield, J. W.) Why Mass Metering?	Aug.	44
Fair, Frank	The Four Dimensions of Leak Classification	Oct.	38
Fleming, Richard E.	Worcester Plows-In Plastic System	Nov.	58
Hale, Dean	How to Cut Rising Costs	May	43
	LNG: Bright New Star on the Energy Scene	June	39
	7000 Feet in Seven Months is Hot & Cold Progress	Sept.	38
	NGPL's Amarillo Line Loops Add 100 Million Cu Ft Capacity	Sept.	46
	Foam Shield Cushions Pipe Against Rock	Sept.	77
	Safety: It's a New Game	Oct.	35
	Imports, Terminals, Satellites Highlight LNG Developments	Oct.	43
	Distribution Piping Reaches New High	Nov.	37
	Plastic Pipe Hits 7800 Miles	Nov.	38
	Storage, LNG, LPG-Air, Holders, Oil-Gas-Industry Ready to Shave '70-71 Peaks	Dec.	33
Ives, George O.	Proving Liquid Turbine Meters	Aug.	56
	CGT's 1970 Loop Program Is Smooth Inside Job	Sept.	42
	Work Completed on Collins Line	Oct.	56
Kee, David F.	Proving Large Capacity Meters to Meet High Accuracy Demands	Aug.	39
Kent, Gregory E.	Mesdar-Skikda Line a Challenging 456 Miles	June	89
Kornfeld, Joseph A.	Computer-Telemetry System Controls Britain Gas Grid	May	68
	South Wales River Crossings Installed in Record Time	June	84
Leach, Edward R.	Transco Loops See FB&D Run a 1200-Mile Spread	Sept.	54
	USGS Rules Designed to Promote Safer Offshore Pipeline Installations	Oct.	50
	X-100 No Longer a Pipe Dream	Nov.	40
Love, Frank H.	Intratex Boosts Houston Area Gas Supply	Sept.	35
	Texas Eastern Installs Packaged Turbine-Compressor Units for $170/hp	Oct.	71
	Research is Finding Answers to Arctic Pipelining	Nov.	43
	Brine Line Serves Chemical Plants	Nov.	72
	TET's LNG Plant Ready to Battle Energy Pinch	Dec.	52
Martin, Charles A.	(and Walker, R. D.) Australia's Longest Pipeline Operational	June	60
Mortier, F. E.	SUMED Pipeline - Shortcut to Europe for Middle East Oil	June	78
Odom, Ivan C.	(and Selstad, John B.) Computer Techniques Applied to Maintenance	May	58
Parson, Daniel	Elasticity Measurements and Value of Service	May	92
	Gas Marketing During Supply Shortages	June	49
	Pollution - Its Effect on Gas Marketing	July	67
	Gas Shortages and Public Understanding	Oct.	78
	Who Can Cure the Gas Shortage?	Dec.	66
Rowland, Leslie O.	Wind and Rain Hamper Laying of Canada's First 42-in.	Sept.	65
St. Amand, Frank	Pilot Operated Regulators (Measurement Manual)	Nov.	51
Scholtz, M. T.	(and Donovan, M.) Solids Preparation for Pipeline Transport	July	40
Selstad, John B.	(and Odom, Ivan C.) Computer Techniques Applied to Maintenance	May	58
Shamp, F. F.	Bi-Directional Piston Prover Tests Turbines for Cryogenic Liquid Measurement	Aug.	64
Simpson, James M.	What Columbia Gulf Has Learned About Turbines	Nov.	78
Stackpole, C. S.	Pollution - Opportunity or Catastrophe for Gas?	July	74
Stansfield, J. W.	(and Evans, H. J.) Why Mass Metering?	Aug.	44
Swinney, Gordon W.	Liquid Measurement for the 70's	Aug.	76
Wager, Joe	New Ideas in Measurement and Pressure Regulation	May	87
	More New Ideas in Measurement and Pressure Regulation	Oct.	81
	Measuring BTU's in a Hot & Cold System	Nov.	63
	Fundamentals of Regulators (Measurement Manual)	Dec.	61
Walker, R. D.	(and Martin, Charles A.) Australia's Longest Pipeline Operational	June	60
Wasp, E. J.	Where the Action Is	July	37

EM report

TITLE OF ARTICLE AND AUTHOR	MONTH	Pg
ECONOMICS		
Oil Consumption Rising to 1975, Ernestine Adams	Jan.	PM 2
Automating Plant Operations, Keith Duell	Mar.	PM 8
How You Get Capital, Lowell A. Murphy	Apr.	PM 4
Oil & Gas Are Not Enough--24th Annual Report Survey, Ernestine Adams	May	EM 5
Canadian Gas Feeds Energy-Hungry US Leslie Orr Rowland	June	EM 4
First Quarter Oil & Gas Companies Reports	June	EM 12
A Look Into Government-Owned Energy Business, Raffaele Girotti	July	EM 4
Capital Outlays Due for Rise in '71	Aug.	EM 7
First Half Financial Reports	Sept.	EM 12
Independent's View of the Energy Gap	Oct.	EM 4
Capital Short? Follow One of These Directions, Lowell A. Murphy	Nov.	EM 5
Third Quarter Oil & Natural Gas Companies Financial Reports	Dec.	EM 10
INTERNATIONAL		
Does Russia Need Middle East Oil?	May	EM 20
Tankers Full--Local Oil Cheapest	Aug.	EM 15
Russia Displays 99-In. Pipe at Gas Congress, Claribel Simpson	Aug.	EM 16
MANAGEMENT DEVELOPMENT		
You Can Read Better, Dr. DuPree Jordan, Jr.	Apr.	PM 14
Making of a Manager, Ernestine Adams	Sept.	EM 7
PLANNING		
Computer Spotlights Middle Managers, George W. Gershefski	Feb.	PM 2
Strategy in Communications To Achieve Capital Goals	Dec.	EM 6

AUTHOR INDEX

AUTHOR	MONTH	Pg
Adams, Ernestine		
Oil Consumption Rising to 1975	Jan.	PM 2
Oil & Gas are Not Enough--24th Annual Report Survey	May	EM 5
Making of a Manager	Sept.	EM 7
Duell, Keith		
Automating Plant Operations	Mar.	PM 8
Gershefske, George W.		
Computer Spotlights Middle Managers	Feb.	PM 6
Girotti, Raffaele		
A Look Into Government-Owned Energy Business	July	EM 4
Jordan, Dr. DuPree		
You Can Read Better	Apr.	PM 14
Murphy, Lowell A.		
How You Get Capital	Apr.	PM 4
Capital Short? Follow One of These Directions	Nov.	EM 5
Rowland, Leslie Orr		
Canadian Gas Feeds Energy-Hungry US	June	EM 4
Simpson, Claribel		
Russia Displays 99-In. Pipe at Gas Congress	Aug.	EM 16